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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,723

12/30/2004

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10/06/2008

EXAMINER

CREPEAU, JONATHAN

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

10/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,723	Applicant(s) DEITERS ET AL.	
	Examiner Jonathan Crepeau	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7-18, 20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/29/04 4/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I and specie (i) in the reply filed on 6/12/08 is acknowledged. The traversal is on the ground(s) that since the claims are novel and nonobvious (according to the International Preliminary Examination Report), all of the claims require the same special technical feature and thus have unity of invention. This is not found persuasive because as set forth below, the claims are rejected under 35 USC 103 over prior art not previously made of record. Since the subject matter linking the claims does not make a contribution over the prior art, there is still believed to be a lack of unity of invention. Furthermore, Applicant urges that "PCT claims relating to a product and to a process specifically adapted for the manufacture of this product should always be allowable." However, as set forth in MPEP 1850, the "specially adapted" provision applies "if the contribution over the prior art of the apparatus or means corresponds to the contribution the process makes over the prior art." In this case, since there is not yet believed to be any feature that makes a contribution over the prior art, the claimed products and processes are still deemed to lack unity of invention.

The requirement is still deemed proper and is therefore made FINAL. Claims 7-18, 20, and 21 are withdrawn as being directed to nonelected inventions and/or species.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pemsler et al (U.S. Patent 4,592,973) in view of Applicant's admitted prior art ("AAPA").

Pemsler et al. is directed to a separator for an electrochemical device. The separator comprises a microporous thermoplastic film such as polypropylene (see col. 6, line 6) and a liquid phase including a polar solvent such as n-decanol (col. 11, line 35) and/or non-polar solvents such as toluene or kerosene (col. 11, line 39). N-decanol falls within all the parameters of the elected species set forth in the instant claims and as such reads on the claimed species. Furthermore, the non-polar solvents are considered to be "oils"; for example, the disclosure of kerosene is tantamount to paraffin oil.

Pemsler et al. do not expressly teach that the thermoplastic has a molecular weight of at least 300,000, or the weight percentages of the components as recited in claim 1.

In the instant specification, paragraphs [0006] and [0007], AAPA discloses that ultra-high molecular weight polyethylene having a weight of $5-7 \times 10^6$ g/mol is customarily used to produce separators.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the substitution of one known element for

another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It is noted that microporous polyethylene is specifically contemplated in Pemsler et al (see Table II), and the use of a high-molecular weight polyethylene as suggested by AAPA would have provided a predictable result; namely the delaying of oxidative degradation of the separator (see [0006] of AAPA).

In addition, although Pemsler et al. do not expressly teach that the oil is present in an amount of 5-35 wt% and the solvent (i.e., n-decanol) is present in an amount of 0.5-5.0 wt% of the total separator weight, it would be obvious to manipulate the amount of each material to affect, for example, ion conductivity (see col. 12, line 1 et seq). It has been held that the discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980). Furthermore, the reference discloses that the liquid content of the separator is typically in the range of 40-70 volume % (col. 6, line 11). Starting from this disclosure, the artisan could routinely optimize the content of each liquid on a weight basis. Accordingly, the ranges recited in claim 1 are considered to be obvious to a skilled artisan.

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Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299.

The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jonathan Crepeau/
Primary Examiner, Art Unit 1795
October 4, 2008